

CLAIMS

1. Method of continuous production of ice-solution suspension wherein the solution is being continuously fed to the processing zone is overcooled; then, the turbulization is performed in the overcooled solution; as a result, ice microcrystals are formed in the solution; after that, the formed ice-solution suspension is removed from the processing zone, in doing this, the said turbulization is chosen with such intensity that the formed ice microcrystals mass transfer balance will be positive, considering their adhesion on the internal surfaces in processing zone.

2. Method according to claim 1 wherein the turbulization of the solution is performed in the cavitation mode.

3. Method according to claim 1 or 2 wherein overcooling of the solution is performed by the way that the solution flow passes along the cooling surface and continuously formed layer of the overcooled solution is removed from the area of its direct thermal contact with this surface before ice microcrystals are formed on the cooling surface.

4. Method according to claim 3 wherein accidentally formed on the cooling surface the ice microcrystals are always removed into the solution.

5. Method according to claim 3 or 4 wherein the ice microcrystals are forcibly held in the peripheral flow layers.

6. Method according to one of claims from 3 to 5 wherein the motion velocity of the ice microcrystals in the flow is forcibly reduced.

7. Device for continuous production of ice-solution suspension is the ice generator, which includes:

- a channel having an inlet for solution feed and an outlet for ice-solution suspension leaving;

- a cooling element having a cooling surface intended for interaction with the solution;

- means for removal of the formed overcooled solution from the area of its direct thermal contact with the cooling surface, and

- means for solution turbulization according to claim 1.

8. Device according to claim 7 wherein the channel wall surface serves as a cooling surface; the channel has a cylindrical form; the means for creation of turbulization made in the form of a hollow rotor placed coaxially to the channel and perforated by holes intended for passing the solution into the rotor hollow and back; and means for removal of the overcooled solution from the area of the direct thermal contact made in the form of guiding blades attached to the rotor, which are placed in said area inclined from radial direction towards the rotor rotation side.

9. Device according to claim 8 wherein the guiding blades have scrapers on their ends to remove ice microcrystals from the cooling surface.

10. Device according to claim 8 or 9 wherein baffle plates are mounted in several sections of said channel and are designed for reducing the motion velocity of the ice microcrystals in the solution flow.

11. Method and device as described above with reference to the enclosed specification.